Guidelines for New Object Development

The following outlines the recommended process for the development of new abstract objects. These steps are based on the process used by TRAC-Monterey during their Standard Army Modeling and Simulation Objects Study which conducted the initial development of the Platform and Unit objects. The guidelines were also influence by the lessons learned from the recent OMSC work in refining the Platform and Unit objects. These guidelines are intended to support the development of objects with applicability across a broad spectrum of the M&S community while at the same time developing a consensus in that community.

Step 1 -- Define the Purpose

Define or describe the purpose of the new object. The intent of this step is to develop a general text description of the object and its functions. Questions helpful in defining the object are:

- What is the purpose of the object?
- What services does it provide?
- Where could this object be used (what types of M&S problem areas)?
- Who could/would use this object?

The initial proponent for an object would draft this description and forward it to group via the reflector for discussion. Depending on the intensity, breadth, and depth of the discussion, this draft may be revised several times. Once a general consensus has been reached this, the effort will proceed to Step 2.

Step 2 -- **Develop Examples**

This step will develop examples of how the object could be used and identify other objects that might interact with the newly proposed object. Note that while this step is closely related to Step 1, it has been identified as a separate step because of the possible changes in the object description developed in the Step 1. While examples may be developed during Step 1 to help promote understanding, a consistent set of examples will be prepared in Step 2 after the description of the object has stabilized. As with Step 1, the examples will be posted to the reflector for discussion and refinement. Once a general consensus has been reached, the object development will proceed to Step 3.

Step 3 -- Develop Component Composition and Design

In this step, the proponent will propose an initial component structure with attributes and messages/methods. As with the other steps, this initial design will be posted to the reflector. At this time the group will be asked to suggest existing models or simulations that could be used to test the robustness and functionality of the proposed object, and to assist in the object scrub process. Attributes are not directly included in the standard object but are implied by accessory (get/set) methods.

Step 4 -- Obiect Design Scrub

In this step, the proponent and other interested OMSC members will use the proposed standard abstract object to *design* objects that could be used in the models and simulations identified in Step 3. This process is best accomplished face-to-face with a small group of subject matter experts. Once the experience with applying the proposed objects to a number of modeling areas has been assimilated, the object structure and composition can be modified as required. Once a robust object is developed, the full OMSC can review the efforts.

Step 5 -- OMSC Group Review.

The object proponent will host a meeting of the full OMSC to review the final draft object design. At this time, the object design will be modified as required and the proponent will develop a package of information that can be used for a M&S community review.

Step 6 -- Community Review

The object with supporting documentation will be provided to the M&S community for review and comment. Comments from the M&S community review will be assessed and any defensible recommendations will be incorporated in the proposed object.

Step 7 -- Senior Level Review

The revised object with supporting documentation will be provided to the senior level review group for review and comment.

Step 8 -- Publication/Distribution

Details for this step are still being developed and may include e-mail (softcopy) distribution, printing press distribution, and internet webpage posting.